

## LITERATURE CITED

- GRAVES, R. C. 1963. The Cicindelidae of Michigan (Coleoptera). *American Midland Naturalist* 69:492-507.
- LINDROTH, C. H. 1955. The carabid beetles of Newfoundland including the French islands of St. Pierre and Miquelon. *Opuscula Entomologica* suppl. 12:1-160.
- SHELFORD, V. E. 1917. Color and color-pattern mechanism of tiger beetles. *Illinois Biol. Monogr.* 3 (4):1-135.
- VAURIE, PATRICIA. 1951. Five new subspecies of tiger beetles of the genus *Cicindela* and two corrections (Coleoptera, Cicindelidae). *American Museum Novitates* no. 1479:1-12.

## REVIEWS

*WORLD CROP PRODUCTION*. Volume I: *PESTS AND DISEASES*. By J. H. SHAPLEY and F. C. H. GAYNOR. Cleveland: Chemical Rubber Company Press, 1969, 270 pp. Cloth \$18.50.

This book provides the first single volume survey of the principle pests and diseases of the main cultivated crops in the world today. Wheat, barley, oats, rice, corn, sorghum, potatoes, sugar beets, cotton, sugar cane, tobacco, apples, pears, peaches, citrus fruits, grapes, olives, coffee, cocoa, tea, bananas, rubber, coconuts, and palm oil are considered individually. An introductory statement of importance, followed by descriptions (not diagnostic) of pests and diseases, their life history, distribution, damaged caused, selected methods of control, and a few illustrations form the bulk of the book. References are given at the end of each crop described. The final chapter deals with herbicidal weed control.

The plan is good, but, because of its wide scope, its weakness is its brevity. The description of pests and diseases requires for identification constant reference to other books and articles, only a few of which are listed. The methods of control considered are those most widely used on a world-wide basis, not necessarily the most up-to-date. Likewise, this means constant reference to other works since the most recent references given were published in 1965.

Thirty-three genera (including 7 'genus spp.' groups and 2 genus only) and 34 species of Coleoptera are mentioned. Of these, 14 species, 4 'genus spp.' groups, and 1 group (white grubs), are discussed in some detail including the mention of controls.

This readable account will be of general interest to the economic entomologist and plant pathologist, but not particularly to the coleopterist.—ERIC H. SMITH, Purdue University.

*WORLD CROP PRODUCTION*. Volume II: By K. A. HASSALL *PESTICIDES*. CRC. Press, 1969, 249 pp. Cloth \$16.60.

This book provides basic information about pesticides and, by considering in detail a few of the more important chemicals in use, illustrates the fundamental principles underlying crop protection. Discussions include methods of application, routes by which the toxicant reaches the site of action, the barriers it encounters, and the functions of supplementary chemicals. The nature of toxic hazards is explained and methods for minimizing toxic effects are discussed. Biochemical mechanisms are included and the various aspects of selective action are considered. The organochlorine and organophosphorus insecticides are comprehensively covered, and the properties of spray supplements and of organic and inorganic fungicides are discussed in detail. Natural insecticides, synthetic carbamate insecticides, organic acaricides, and herbicides are discussed in less detail.

The author does a commendable job in accomplishing his purpose. A very readable account of much detailed information on the nature of toxicants and how toxicants get their job done is presented.

Students, teachers, and the educated layman alike will find this a valuable guide with the proper perspective on the confusing and conflicting information published on this subject.—ERIC H. SMITH, Purdue University.